

CLAIMS

1. A method for a subscriber station registration in a broadcast
2 communication system, comprising:
 receiving a HSBS channel modulating a first frequency; and
4 monitoring a timer status for the HSBS channel, and if the timer status is
expired:
6 performing a broadcast service registration with a sector
transmitting the HSBS channel;
8 setting status of the timer for the HSBS channel to enabled; and
starting a timer for the HSBS channel.
2. The method as claimed in claim 1 wherein performing a broadcast
2 service registration with a sector transmitting the HSBS channel further
comprises:
4 transmitting a paging identifier to the sector.
3. The method as claimed in claim 2 wherein transmitting a paging identifier
2 to the sector further comprises:
 transmitting an identifier of the HSBS channel monitored by the
4 subscriber station to the sector.
4. The method as claimed in claim 2 wherein transmitting a paging identifier
2 to the sector further comprises:
 transmitting an identifier of the frequency monitored by the subscriber
4 station to the sector.
5. The method as claimed in claim 1, further comprising setting timer status
2 to expired for all HSBS channels upon power-up of the subscriber station.
6. A method for a subscriber station registration in a broadcast
2 communication system, comprising:

receiving a broadcast service registration from the subscriber station at a
 4 sector;

adding a paging identifier to the subscribers' station paging set; and
 6 starting a timer for the paging identifier.

7. The method as claimed in claim 6, further comprising:
 2 monitoring a timer status of all paging identifiers for all subscriber
 stations' paging sets, and if a timer status of a paging identifier for a subscriber
 4 station is expired, then removing the paging identifier from the subscriber's
 station paging set.

8. The method as claimed in claim 6, further comprising adding an identifier
 2 for the frequency that the subscriber station monitors upon power-up to the
 subscribers' station paging set

9. The method as claimed in claim 6 wherein adding a paging identifier to
 2 the subscribers' station paging set comprises:
 adding an identifier of the HSBS channel monitored by the subscriber
 4 station to the subscribers' station paging set

10. The method as claimed in claim 6 wherein adding an identifier to the
 2 subscribers' station paging set comprises:
 adding an identifier of a frequency modulated by the HSBS channel
 4 monitored by the subscriber station to the subscribers' station paging set

11. A method for paging a subscriber station in a broadcast communication
 2 system, comprising:
 determining a status of the subscriber station's paging set;
 4 determining paging channels on which to page the subscriber station in
 accordance with the determined status of the subscriber station's paging set;
 6 and
 paging the subscriber station on all determined paging channels.

12. The method as claimed in claim 11 wherein said determining a status of the subscriber station's paging set comprises:

receiving at a subscriber station a HSBS channel modulating a first frequency;

monitoring at a subscriber station a timer status for the HSBS channel, and if the timer status is expired, then:

performing a broadcast service registration with a sector transmitting the HSBS channel;

setting status of the timer for the HSBS channel to enabled; and

starting a first timer for the HSBS channel;

receiving at the sector the broadcast service registration from the subscriber station;

adding at the sector a paging identifier to the subscribers' station paging set;

starting at the sector a second timer for the paging identifier;

monitoring at the sector a timer status of all paging identifiers for all subscriber stations' paging sets, and if a timer status of a paging identifier for a subscriber station is expired, then removing the paging identifier from the subscriber's station paging set.

13. The method as claimed in claim 11 wherein said determining a paging channel on which to page the subscriber station in accordance with the determined status of the subscriber station's paging set comprises:

determining frequencies on which to page the subscriber station in accordance with paging identifiers contained in the subscriber station paging set;

determining paging channels on which to page the subscriber station for each of the frequencies; and

paging the subscriber station on all determined paging channels.

14. The method as claimed in claim 11 wherein said determining a status of the subscriber station's paging set comprises:

transmitting from the subscriber station a first notification of a desire to receive a broadcast channel;

transmitting from the subscriber station a second notification a desire to
6 cease broadcast channel reception;

adding a paging identifier to the subscriber station paging set upon
8 receiving the first notification; and

removing the paging identifier from the subscriber station paging set
10 upon receiving the second notification.

15. The method as claimed in claim 14, further comprising:

2 transmitting from the sector permission to receive the broadcast channel
in response the first notification; and

4 receiving at the subscriber station the broadcast channel after receiving
the permission

16. The method as claimed in claim 11 wherein said determining a status of
2 the subscriber station's paging set comprises:

transmitting from the subscriber station a notification of a desire to
4 receive a broadcast channel modulating a second frequency different from the
first frequency monitored by the subscriber station;

6 removing an identifier of the first frequency from the subscriber station
paging set upon receiving the notification; and

8 adding an identifier of the first frequency to the subscriber station paging
set upon receiving the first notification.

17. The method as claimed in claim 16, further comprising:

2 transmitting from the sector permission to receive the broadcast channel
in response the first notification; and

4 receiving at the subscriber station the broadcast channel after receiving
the permission.

18. A method for paging a subscriber station in a broadcast communication
2 system, comprising:

modulating all frequencies of a sector with a broadcast channel;

4 determining paging channels on which to page the subscriber station for
each of the frequencies; and

6 paging the subscriber station on all determined paging channels.

19. A method for paging a subscriber station in a broadcast communication
2 system, comprising:

4 determining a frequency that the subscriber station monitors upon power-
up;

 determining all frequencies modulated by broadcast channels;

6 determining paging channels on which to page the subscriber station for
each of the frequencies; and

8 paging the subscriber station on all determined paging channels.

20. A method for paging a subscriber station in a broadcast communication
2 system, comprising:

4 determining a frequency that the subscriber station monitors upon power-
up, and if at least one broadcast channel is transmitted, then:

6 determining all frequencies modulated by the at least one broadcast
channels to which the subscriber station is subscribed;

8 determining paging channels on which to page the subscriber station for
each of the frequencies; and

 paging the subscriber station on all determined paging channels.

21. The method as claimed in claim 20, further comprising:

2 determining paging channel on which to page the subscriber station for a
frequency that the subscriber station monitors upon power-up; and

4 paging the subscriber station on the determined paging channel if no
broadcast channel is transmitted.

22. A method for assigning frequencies to a subscriber station upon power-
2 up in a broadcast communication system, comprising:

4 assigning a subscriber station to any of the frequencies transmitted by a
sector in accordance with a hashing function if no broadcast channel is
transmitted.

23. The method as claimed in claim 22 further comprising:

2 assigning a subscriber station subscribed to a broadcast channel to the
 frequencies transmitted by a sector modulated by the broadcast channel in
 4 accordance with a hashing function if broadcast channel is transmitted.

24. A method for providing broadcast parameters in a broadcast
 2 communication system, comprising:
 receiving at each subscriber station in an idle state a first channel
 4 containing a message;
 decoding at each subscriber station a header of the message; and
 6 decoding the remainder of the message only at the subscriber stations
 interested in a broadcast service.

25. The method as claimed in claim 24 wherein said receiving at each
 2 subscriber station in an idle state a first channel containing a message
 comprises:
 4 receiving at each subscriber station in an idle state a channel provided by
 a communication system for overhead messages.

26. The method as claimed in claim 24 further comprising:
 2 receiving at each subscriber station interested in a broadcast service in a
 dedicated mode state a separate channel containing a message; and
 4 decoding at the subscriber station the message.

27. The method as claimed in claim 26 wherein said receiving a first channel
 2 containing a message at each subscriber station in an idle state comprises:
 receiving at each subscriber station in an idle state a dedicated channel.

28. A method for providing broadcast parameters in a broadcast
 2 communication system, comprising:
 transmitting from a sector a message in a first channel;
 4 receiving at each subscriber station in an idle state the first channel;
 decoding at each subscriber station a header of the message;
 6 decoding the remainder of the message only at the subscriber stations
 interested in a broadcast service; and

8 failing to receive the first channel at each subscriber station in a
dedicated mode.

29. The method as claimed in claim 28, wherein said transmitting from a
2 sector a message in a first channel comprises:

4 transmitting from the sector a channel provided by a communication
system for overhead messages.

30. The method as claimed in claim 29, further comprising:
2 transmitting from the sector a separate channel containing the message
to each subscriber station interested in a broadcast service in a dedicated
4 mode; and

6 decoding the message at each subscriber station interested in a
broadcast service in a dedicated mode.

31. The method as claimed in claim 30, wherein said transmitting from the
2 sector a separate channel containing the message to each subscriber station
interested in a broadcast service in a dedicated mode comprises:

4 transmitting from the sector a dedicated channel.